An Introduction to Urban Design

by Ilene Watson

When walking down the street you see a place that appears interesting and inviting. Across the street you glance at another area but it looks unappealing and uncomfortable. Which place would you rather be? That's easy to answer. The more difficult question is: Why? What is it that creates a place that people like and use?

Understanding some of the ideas of urban design can help us better answer this question. Urban design does not have to be a mystery. Knowing a few important concepts can make it easier for you to observe what works – and what doesn't – as you stroll through your town, or as you review a project application.

RECENT HISTORY

The needs of the automobile, and a modernistic view of architecture (focusing on a large-scale, boxy international style) has dominated much of development since the 1950's. Unfortunately, this has led to the creation of places which, while functional, often disregard the comfort and enjoyment of the ordinary person.

Be An Observer

"Examine the city in your daily to-and-fro; and pay particular attention to your own reactions, to what you like and to what you avoid. Examine your own feelings about different environments and your own preferences. To what places are you drawn? What do you avoid? Then try to analyze what specific things attract and repel you. … Take a daily tour. Vary your route to work each day. An old real estate man told me of this technique. If done consistently, and with attention, it eventually reveals a great deal about wherever you live."

– *From:* City Comforts: How to Build An Urban Village, *by David Sucher*

Since the late 1970's and early 1980's, however, there has been a growing sense that something is missing in the way much of the urban environment is being shaped. Communities have started to call for the development of urban areas based on the experiences and desires of the

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individual. People want to be able to walk on a street that is comfortable, interesting, and pleasing to the eye. The evolving collection of knowledge and ideas called urban design is an expression of this search for a better connection between people and the physical world they live in.

THE NATURE OF URBAN DESIGN

Unfortunately, there are no hard and fast rules related to urban design. A structural beam in a building must meet certain requirements for that building to stand. A road must be built in a certain way to avoid future potholes.

Urban design, however, is not a series of rules and standards. Rather, it is a group of concepts that, once understood, can lead to a fresh way of perceiving streets, buildings, and spaces – and insights into why certain places are appealing and others are not. With urban design concepts in mind you should be able to better question architectural presentations and consider the impact of development proposals on your town's character.

Urban design operates on various scales – from orienting people through the layout and hierarchy of streets and buildings, to appreciating an attractive paving detail in front of a store's door. The ideas can be applied to buildings, the street, land uses, urban park development, and anything else that is woven into the fabric of a town. The purpose of this article is to provide you with a basic introduction to urban design, an introduction which hopefully will lead you to further explore this vital topic.

THE FOUNDATION OF URBAN DESIGN

The most important concept to remember is that good urban design is people-oriented design. Urban design provides a way to humanize the world we live in. As such, you will often hear terms like "pedestrian focus" and "human scale." The intent is to examine buildings, streets, and open spaces (and the uses in them) in terms of how they relate to the experience of the individual.

So what do individuals experience in a well-designed urban environment? As pedestrians, they are able to walk comfortably, while observing and participating in what is happening around them. Although enjoying vistas, they also see their city or town as something "close up" with intricate details, interesting buildings, and varied activities. They can stop to admire a view, window shop, get a cup of coffee, watch other people, or meet a friend. They can easily find a bench in the shade of a tree, a bin in which to drop a used wrapper, or a public comfort station or toilet if need be. Most importantly, they feel safe and are not worried about traffic or personal risk.

On the following pages, we'll focus on eight key urban design concepts that can help create such an environment. The accompanying sidebars will also point you in the direction of some good additional readings if you want to learn more about urban design.

R. MULDOFF

Portsmouth, New Hampshire's Market Street offers places to sit and relax.

1 Physical Comfort

What are the requirements for people to feel comfortable? There are basic needs like a good walking surface and some garbage bins, but a good environment also offers places to sit, some shade on a hot day, shelter from the rain, readily accessible public toilets, and decent lighting at night. It is also possible to physically design areas in a way that may help to deter crime.

Comfort Requires Safety

"Human communications flourish only in safety. A prerequisite for meeting people or getting to know them better is feeling safe, secure and unthreatened. … The first principle of security in any situation is surveillance. The basic technique of urban security is natural surveillance and human presence. … But surveillance in our context does not mean formal watching but the casual observation that comes naturally, for example, when one is sitting on the porch after dinner. The second principle is territoriality: people must view the public space as their own and thus take some responsibility for it."

From: City Comforts: How to Build an Urban Village*, by David Sucher (City Comforts Press, 1995).*

For additional information on how design can enhance safety, see Oscar Newman's groundbreaking book, Defensible Space *(Macmillan, 1973) and Sherry & Stanley Carter's "Crime Prevention through Environmental Design in Sarasota, Florida," in PCJ #16 (part of the PCJ's Fall 1994 "safer communities" issue).*
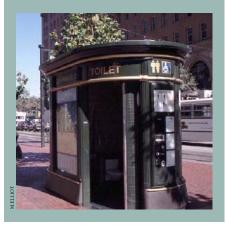

I.WATSON

In too many parts of our cities and towns, pedestrian considerations seem to be an afterthought, if not totally forgotten.

Editor's Note:
Meeting An Essential Need

I would venture a guess that almost all of us have – on more than one occasion – searched in vain for a public restroom. Most often, it's when we're visiting an unfamiliar city or town. The bad news is that providing publicly accessible restrooms does not seem to be high on most public officials' radar. The good news is that there are at least some signs of change, as evidenced by the following report from Mark Elliot, a doctoral student in planning at the University of Southern California, which recently appeared in *Roadside* magazine:

"Coming soon to a city near you? In a big city like San Francisco, home to cafes and coffee-houses aplenty, how much is relief worth – maybe a quarter? On busy Market Street in San Francisco, where a restaurant restroom is tougher to find than cheap office space, the well-designed Decaux kiosk from France is a pleasure to use. Put your coin in the slot and the curved door retracts to reveal a spacious Art Deco-accented interior. It is handicapped accessible, and provides pictograph directions for use. Progress in public accommodation never smelled so clean!"

M.ELLIOT

2 Circulation and Accessibility

There should be a peaceful coexistence between the pedestrian and the car. Comprehending and feeling comfortable in the urban environment means that separation between pedestrian use, driving lanes, and parking must be easy to see and interpret. In many developments it will be important to reassert the priority of the pedestrian when looking at circulation.

Humanizing Our Streets

"Functional streets necessarily involve both cars and pedestrians. Because cars have become integral parts of our lives, we have many specialists with large budgets making sure that drivers can move to and from their daily activities. Yet very little attention has been given to the functional needs of pedestrians …

Our greatest challenge is humanizing arterial streets – those fast moving roads that link our major goods and services. Wide lots and streets, acres of parking, the absence of sidewalks, and scattered auto-oriented shopping all make for a treacherous pedestrian environment. Addressing this situation may require changes such as: narrowing the road at intersections; constructing wide sidewalks along main streets; adding sidewalks on streets leading to residential neighborhoods; encouraging

I.WATSON

Wide arterial roads are often a "no-man's zone" for pedestrians. Providing an adequate buffer strip and sidewalks can help turn this around, as seen here along Highway 97 in Kelowna, B.C.

commercial uses that serve pedestrians at major intersections; and changing land uses between intersections to reduce auto activity."

From: "Taming the Automobile," by Richard Untermann, in PCJ #1 (November/December 1991).

For additional information on designing streets that work for cars and pedestrians, see Donald Appleyard's Livable Streets *(Univ. of California Press, 1981), and Richard Untermann's "Sidewalk Essentials" in PCJ #27 (Summer 1997; available to download on plannersweb.com).*

Sometimes distinctive signs or banners are used to identify districts of a city or town. When used thoughtfully, these can be effective in helping orient visitors. In Burlington, Vermont, an arching sign (combined with information booths) demarcates the waterfront area.

❸ Transitions and Boundaries

Most people feel a deep need to know where one neighborhood or district ends and another begins. A logical world with good spatial definition orients us and gives us information to help us make decisions about where to go and what to do.

Elements such as the shape of buildings, doorway design, paving materials, curbs, landscaping, street furniture, changes in the elevation of the ground, and signage let us know where one category of uses gives way to another.

The transitions and boundaries of the urban world tell us when we enter and leave the town, what is public and what is someone's private space, where to sit and meet people, where to stroll, where to shop, and where to drive or park. Using urban design to clearly show these transitions and boundaries can be the difference between comfort and confusion; and between feeling invited and feeling unwelcome.

Boundaries

"Many parts of a town have boundaries drawn around them. These boundaries are usually in people's minds. They mark the end of one kind of activity, one kind of place, and the beginning of another. In many cases, the activities themselves are made more sharp, more vivid, more alive, if the boundary which exists in people's minds is also present physically in the world."

From: Christopher Alexander, et al., A Pattern Language: Towns-Buildings-Construction (Oxford University Press, 1977).

For additional information on the role of boundaries and edges, see Kevin Lynch's The Image of the City (The MIT Press, 1960).

For a look at the role of "gateways" into cities and towns, see Suzanne Sutro Rhees' "Gateways: Creating Civic Identity," PCJ #21 (Winter 1996; available to download from plannersweb.com)

❹ Scale

When a pedestrian on the street feels overwhelmed by the sheer bulk and size of a structure one thing is certain: it is not the pedestrian who is "out of scale" – it is the building. Many large retail stores being built today have just a single entrance on a two story wall, one hundred fifty feet long. An established small town retail block may, in contrast, have (in the same one hundred fifty feet) four or five stores at a scale that is consistent with the pedestrians who pass by. Achieving a "human scale" usually means avoiding long, unbroken horizontal expanses, and paying attention to how upper stories of buildings relate to people on the street.

The varied rhythm of storefronts in older towns and cities — as here in Brattleboro, Vermont — helps establish a pedestrian-oriented scale. Contrast this with the blank walls greeting pedestrians at many newer stores.

Blank Walls

"The dominant feature of the townscape is coming to be the blank wall. They have a message. They are a declaration of distrust of the city and its streets and the undesirables who might be on them. … The one good thing that can be said of them is that they are so awful anything else looks good by contrast. The best thing to do with blank walls is to do away with them, or, at the very least, to prevent their recurrence.

An owner who lines his frontage with a blank wall not only deadens his part of the street; he breaks the continuity that is so vital for the rest of the street."

From: City: Rediscovering the Center, by William H. Whyte (Doubleday, 1988)

One of the most influential books on the built environment, A Pattern Language: Towns-Buildings-Construction, by Christopher Alexander, et. al. (Oxford Univ. Press, 1977) includes much on how to achieve a human scale in buildings – and in towns.

A Spring afternoon in downtown Burlington, Vermont.

How to Use Your Knowledge

Awareness of urban design can make a difference when you view an application or work on your town plan. Here are some questions you might keep in mind.

- Is basic physical comfort (walking surfaces, shade, sun, lighting, garbage bins, seating) accommodated?

- Is circulation between pedestrians, cars and bikes easy to see and comprehend?

- Is there enough detail and variation from a pedestrian's perspective?

- How does the scale of the building relate to the street?

- Does the design make it clear to the pedestrian what his options are? (sit and relax, enter a building, walk quickly, stop and look at a window display, cross a road)

- Does what is happening inside the building interact and connect to the street?

- Can more be done to provide choices and options for people to be there?

- Is the site cohesive within itself, and does it relate to the town as a whole?

⑤Reasons to be There

People like to do a variety of things at different times. Someone might want to sit outside with a newspaper, another might be out for a brisk walk, another might want to shop and is interested in wandering slowly. A family might be looking for something that involves their children. Perhaps a person might want to have lunch while listening to some live music.

Offering choices makes the world a more interesting place to be and is more inclusive of a wider variety of people. Good urban design creates an environment with variety and choice which contributes to a feeling that a town has vitality and energy.

Yesterday … and Today

"In River Park [in 1940] informal socializing spilled out into the street and into places of commerce … The more gregarious or less busy citizen might take an hour to negotiate one block of Main Street, for there were always a good many people walking or lounging along it during daylight hours. … The old-timers liked nothing better than to talk with the more active people of the community and keep up on things.

If one were to visit River Park today, one would see quite a different place from that which existed in 1940. … The people are largely gone from the street now, as are the physical amenities that earlier accommodated them.

The architecture of Main Street has changed noticeably. The earlier storefronts featured large windows and the majority of them had outdoor seating, in most cases integral to their architecture. Wide steps and Kasota stone slabs that flanked the entrances were heavily used by those who found them cool places to sit in the summer. … Large windows and the encouragement to lounge at the portals combined to unify indoors and out and to encourage a 'life on the street' as well. That outdoor seating is all but gone now. The new storefronts are tight against the street and their much smaller windows allow little seeing in or seeing out."

From: The Great Good Place*, by Ray Oldenburg (Paragon House, 1989)*

One of the landmark books examining how the urban environment works (and doesn't work), Jane Jacob's The Death and Life of Great American Cities *(Vintage Books Edition, 1992; originally published in 1961) includes much on the importance of variety and choice.*

The Art of Design

There is also an "art" to urban design that goes beyond technical knowledge – though understanding basic design concepts is certainly a prerequisite. Not everyone has the same talents, and some are more skilled than others at designing buildings – or urban areas. However, everyone can improve their ability to perceive their surroundings, and consider what works and what does not.

Continuing to learn about urban design will influence how you think about your surroundings. Your planning commission might consider inviting a panel of architects and designers to a forum on how urban design has shaped, or might shape, your community. Discussion can lead to a better understanding of the role design plays in shaping cities and towns – and consideration of ways in which good design can be encouraged.

Over time you will come to see your town as more than just a collection of streets and buildings, but as a complex environment intricately bound to the people who use it.

Providing most of the parking behind commercial buildings and having a broad central pedestrian promenade are two factors that have helped make Mizner Plaza in Boca Raton, Florida (photos this page), a highly successful mixed use development.

⑥ The Connection Between Street and Building

People want to come to a vibrant commercial area – and a vibrant commercial area attracts people. While good urban design cannot be counted on to solve broader issues of depopulation and economic shifts, it can have a positive impact on an area's vitality.
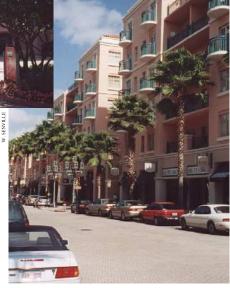

Actions taken to improve the connection between buildings and the street can make an area more interesting and inviting to pedestrians, which in turn benefits retailers. Large display windows, large interesting doors, detailed building design, putting buildings on the street with parking behind, paying attention to walking distances, and allowing for the spilling out of commercial activities onto the sidewalk can all contribute to a more vibrant community.

Window Shopping

"In many cities window shopping would appear to be a dying activity. There are, for one thing, fewer windows to shop. … Furthermore, that former adjunct to the window, the door, may be on its way out, too. Increasingly, access is from within the buildings, sometimes along replicas of shopping streets. But the real thing still works. Where there are display windows, people window-shop, and the stores that have them enjoy a competitive edge greater than before."

From: City: Rediscovering the Center, *by William H. Whyte (Doubleday, 1988)*

Set-Backs

"A building is most often thought of as something which turns inward – towards its rooms. But unless the building is oriented toward the outside, which surrounds it, as carefully and positively as toward its inside, the space around the building will be useless and blank. … Building set-backs from the street, originally invented to protect the public welfare by giving every building light and air, have actually helped greatly to destroy the street as a social space."

From: Christopher Alexander, et al., A Pattern Language: Towns-Buildings-Construction *(Oxford University Press, 1977)*

For additional information on how good design can yield economic benefits by strengthening downtown, see Adele Fleet Bacow's Designing the City *(Island Press, 1995) and Edward McMahon's "Design Matters" (PCJ #21, Winter 1996; available to download on plannersweb.com).*

⑦ Detail, Variety, and Complexity

Due to the slower pace, people are more aware of their surroundings as pedestrians than when driving a car. As intelligent and curious individuals, we enjoy an environment with variety, detail, and complexity. A sidewalk might have a brick paving edge that changes design at intersections. A building might have a mosaic of tile in front of the door that catches our eye, or a change in appearance around windows.

Details, variety, and complexity provide the richness that makes things interesting for us.

This is not to say that infinite variety is preferred. Too much variety and our world becomes hard to understand. A building may have a palette of three to five related colors, not twenty unrelated ones. Landscaping may consist of groupings of a selected number of species, not one of everything. Variety is best provided within an overall cohesive framework.

What Residents Want

"Regardless of architectural style, most residents prefer some degree of aesthetic complexity and variety in their neighborhood. In a nationwide U.S. study of HUD-assisted projects those developments that residents rank high on appearance have in common a degree of architectural complexity. In one case row houses were differentiated by the use of materials, textures, roof shape, trim, and size; in a second case complexity was achieved by breaking down the total volume of buildings into smaller units and varying the shape, size, and placement of windows and balconies … Conversely, the least liked developments range from traditional to contemporary styles but have in common monotonous facades, messages of institutionality (unscreened clotheslines, pipe railings), little or no landscaping, or very poor maintenance."

From: Housing As If People Mattered, *by Clare Cooper Marcus and Wendy Sarkissian (Univ. of California Press, 1986).*

Pavings

"The floor underfoot is a very immediate and personal kind of experience for pedestrians, but unfortunately, modern city builders have forgotten the visual and tactile qualities possible through the floor. It can be patterned, textured, colored, and thrown like a rich rug underfoot. … The textures of pavings can guide the activities and movements of pedestrians, can even channel their direction, or prevent their encroaching on specific areas, or slow them down."

From: Cities, *by Lawrence Halprin (The MIT Press, 1972)*

Something as simple as a clock can become a local landmark – and make for a more interesting place. Main Street, Brattleboro, Vermont.

Sidewalk paving patterns can be simple, as in Peachland, B.C. [on left] or quite decorative, as along Barcelona's principal boulevard [above]. But either way, they add visual interest to the streetscape. So can building details, as on a Brattleboro, Vermont, building facade [top left].

Downtown Newburyport, Massachusetts projects a feeling of cohesiveness through the use of building materials, window patterns, roof line, and lighting fixtures.

⑧ Cohesiveness

Cohesion allows us to feel an object's unity and structure. A building may show cohesion in design through its roof line, color, material, and overall form. Similarly, a neighborhood or district can possess elements which provide a sense of cohesion. For example, a neighborhood – or even an entire town – might have a sidewalk with the same details. A consistent pattern of street trees or lighting fixtures can also impart cohesiveness, as can the use of common, locally available building materials. Even the absence or removal of distracting or jarring features, such as overhead utility lines, can help bring a sense of unity to a town. ◆

Legibility

"Just as this printed page, if it is legible, can be visually grasped as a related pattern of recognizable symbols, so a legible city would be one whose districts or landmarks or pathways are easily identifiable and are easily grouped into an over-all pattern."
From: The Image of the City, *by Kevin Lynch (The MIT Press, 1960)*

Stability

"Cherished features of our environment are preserved not because they are 'beautiful' but because they reassure us by preserving, in turn, our emotional stability in a world paced by frightening change."
From: Icons & Aliens: Law, Aesthetics, and Environmental Change, *by John J. Costonis (Univ. of Illinois Press, 1989)*

Ilene Watson is a planner with the Central Okanagan Regional District Planning Department in Kelowna, British Columbia. She has worked on design guidelines, a town centre strategic plan, large neighborhood master planning projects, and a new zoning bylaw. Her previous article for the Planning Commissioners Journal, "An Introduction to Design Guidelines," appeared in Issue #41 (Winter 2001).

Not Just Aesthetics

Urban design is sometimes thought of as strictly an aesthetic concern. Many times it's simply seen as a way to make buildings more attractive. Urban design is much more than that and considers both functional design and how we feel about our environment. Functional design refers to the way things actually work and relate to each other. For example, buildings fronting directly on the street and sidewalk allow the uses inside the buildings to be physically close to the pedestrian. Windows, recessed doors, and displays animate an exchange between the activities inside the building and the pedestrian walking by. Urban design involves appearance, the way uses function and relate to each other, and how we perceive the results.